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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/731,784 | 12/09/2003 | Robert G. McNiece | LUCE001US0 | 4903 |

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EXAMINER

TRAN, THANG V

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2653 | |

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/731,784 | MCNIECE, ROBERT G. | |
| | Examiner | Art Unit | |
| | Thang Tran | 2653 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29-38 is/are allowed.
- 6) ☐ Claim(s) 1-12 and 14-27 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-12, 14-16 and 20-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Dahan et al. (US 6,137,763).

Dahan et al., according to Fig. 1, shows a detection system comprising all features of the instant claimed invention as interpreted below.

Regarding claim 1, see Fig. 1 which shows an electromagnetic radiation generated from a source (12) is directed by optical elements (4-18) onto a surface of a data storage device (100); and a multi-dimensional data stream reflected from the storage device (100) is received by a array detector (24).

Regarding claims 2, 3, and 5 see a holographic optical element 22, detector 24 and the light reflected from the disk 100.

Regarding claims 4, 6, see array detector 24.

Regarding claim 7, see modulated data recorded on disk 100.

Regarding claim 10, see disk 100.

Regarding claim 11, see the rejection applied to claim 1.

Regarding claim 12 see modulated data recorded on disk 100.

Regarding claim 14, see circuits 26-33 for measuring the second signal.

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Regarding claims 15 and 16, see recording medium 100 and the light beam irradiated on the disk 100.

Regarding claim 20, see Fig. 1 which shows a data storage medium (100); a sensor array (24); a mirror (16); and holographic lens (22) adapted to cooperate with the mirror so as to generate a hologram in the form of multiple data patterns that are focused upon the sensor array (24).

Regarding claims 21 and 24, holographic lens 22 and detector 24 in Fig. 1

Regarding claims 22 and 23, see light source (12).

Regarding claims 25-27, see respective disclosure of data recorded on the recording medium 100.

3. Claims 1-12 and 14-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Komma et al. (US 5, 815,293).

Komma et al., according to Fig. 21, shows a detection system comprising all features of the instant claimed invention as interpreted below.

Regarding claim 1, see Fig. 21 which shows an electromagnetic radiation generated from a source (52) is directed by optical elements (53, 54, 27) onto a surface of a data storage device (23, 25); and a multi-dimensional data stream reflected from the storage device is received by a array detector (57).

Regarding claims 2, 3, and 5 see a holographic optical element 56, detector 57 and the light reflected from the disk.

Regarding claims 4, 6, see array detector 57.

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Regarding claim 7, see data recorded on disk 23 or 25.

Regarding claims 8 and 9, see media 23 and 25 and the reproduction of data therefrom.

Regarding claim 10, see disk 23 or 25.

Regarding claim 11, see the rejection applied to claim 1.

Regarding claim 12 see data recorded on disk 23 or 25.

Regarding claim 14, see Figs. 25A-25C and their respective disclosure for measuring the second signal.

Regarding claims 15 and 16, see recording medium 23 or 25 and the light beam irradiated thereon.

Regarding claims 17 -19, see media 23 and 25 and the reproduction of data therefrom.

Regarding claim 20, see Fig. 21 which shows a data storage medium (23 or 25); a sensor array (57); a mirror (54); and holographic lens (56) adapted to cooperate with the mirror so as to generate a hologram in the form of multiple data patterns that are focused upon the sensor array (57).

Regarding claims 21 and 24, holographic lens 56 and detector 57 in Fig. 21

Regarding claims 22 and 23, see light source (52).

Regarding claims 25-27, see respective disclosure of data recorded on the recording medium 23 or 25.

Regarding claim 28, see light source (52); a beam splitter (54); a plurality of light beams (S1 and S2); and a plurality of disk 23 and 25.

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Allowable Subject Matter

4. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 29-38 are allowed.

Claims 13 and 29-38 are allowable over the prior art of record because the prior art of record, considered in combination or individually fails to suggest or fairly teach a device for generating a multidimensional signal including a combination of all limitations as particularly recited in each of claims 13,17,,19 and 31. Claims 18, 19, 30 and 32-38 are allowable with their respective parent claim.

Cited References


6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references relate to an optical device for reading multidimensional signal from a recording medium.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thang Tran whose telephone number is (703) 308-1551. The examiner can normally be reached on M-F 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 703 305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thang Tran
Primary Examiner
Art Unit 2653